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Docket No.: 64190(71432)  
(PATENT)



**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Patent Application of:  
Joacim Elmén et al.

Application No.: 10/550,152

Confirmation No.: N/A

Filed: September 20, 2005

Art Unit: N/A

For: SHORT INTERFERING RNA (siRNA)  
ANALOGUES

Examiner: Not Yet Assigned

**INFORMATION DISCLOSURE STATEMENT (IDS)**

MS Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

Pursuant to 37 CFR 1.56, 1.97 and 1.98, the attention of the Patent and Trademark Office is hereby directed to the references listed on the attached PTO/SB/08. It is respectfully requested that the information be expressly considered during the prosecution of this application, and that the references be made of record therein and appear among the "References Cited" on any patent to issue therefrom.

This Information Disclosure Statement is filed before the mailing date of a first Office Action on the merits as far as is known to the undersigned (37 CFR 1.97(b)(3)).

Applicant has not submitted copies of each cited U.S. patent and U.S. patent application as required by 37 CFR 1.98(a)(2)(i), amended October 2004, as the U.S. Patent and Trademark Office has waived this requirement for all U.S. patent applications. Applicant submits herewith copies of foreign and non-patents in accordance with 37 CFR 1.98(a)(2).

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The Director is hereby authorized to charge any deficiency in the fees filed, asserted to be filed or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Deposit Account No. 04-1105, under Order No. 64190(71432).

Dated: February 14, 2006

Respectfully submitted,

By 

Stephana E. Patton

Registration No.: 50,373

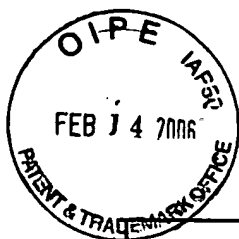
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PTO/SB/08a/b (07-05)

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STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

Sheet 1 of 2

**Complete if Known**

Application Number	10/550,152
Filing Date	September 20, 2005
First Named Inventor	Joacim Elmén
Art Unit	N/A
Examiner Name	Not Yet Assigned
Attorney Docket Number	64190(71432)

**U.S. PATENT DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Document Number Number-Kind Code <sup>2</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear

**FOREIGN PATENT DOCUMENTS**

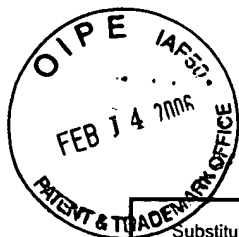
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	BA	WO-WO 2004/042046 A2	05-21-2004			

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**NON PATENT LITERATURE DOCUMENTS**

Examiner Initials	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
	CA	FIRE ET AL., "Potent and specific genetic interference by double-stranded RNA in <i>Caenorhabditis elegans</i> ", <i>Nature</i> , Vol. 391, February 19, 1998, pp. 806-811.	
	CB	ANDREW FIRE, "RNA-triggered gene silencing", <i>TIG</i> , Volume 15, No. 9, September 1999, pp. 358-363.	
	CC	JULIA M. BOSHER ET AL., "RNA interference: genetic wand and genetic watchdog", <i>Nature Cell Biology</i> , Volume 2, February 2000, pp. E31-E36	
	CD	ANNA WARGELIUS ET AL., "Double-Stranded RNA Induces Specific Developmental Defects in Zebrafish Embryos", <i>Biochemical and Biophysical Research Communications</i> , Volume 263, (c) 1999, pp. 156-161.	
	CE	FLORENCE WIANNY ET AL., "Specific interference with gene function by double-stranded RNA in early mouse development", <i>Nature Cell Biology</i> , Volume 2, February 2000, pp. 70-75.	
	CF	LENA ALEXOPOULOU, "Recognition of double-stranded RNA and activation of NF- $\kappa$ B by Toll-like receptor 3", <i>Nature</i> , October 2001, pp. 732-738.	
	CG	GEORGE STARK ET AL., "How Cells Respond To Interferons", <i>Annu. Rev. Biochem.</i> , Volume 67, (c) 1998, pp. 227-264.	
	CH	CHARLES E. SAMUEL, "Antiviral Actions of Interferons", <i>Clinical Microbiology Reviews</i> , Volume 14, No. 4, October 2001, pp. 778-809.	
	CI	PHILLIP D. ZAMORE ET AL., "RNAi: Double-Stranded RNA Directs the ATP-Dependent Cleavage of mRNA at 21 to 23 Nucleotide Intervals", <i>Cell</i> , Volume 101, (c) 2000, pp. 25-33.	
	CJ	SAYDA M. ELBASHIR ET AL., "RNA Interference is mediated by 21- and 22-nucleotide RNAs", <i>Genes &amp; Development</i> , Volume 15, (c) 2001, pp. 188-200.	
	CK	SAYDA M. ELBASHIR ET AL., "Duplexes of 21-nucleotide RNAs mediate RNA interference in cultured mammalian cells", <i>Nature</i> , Volume 411, May 24, 2000, pp. 494-498	
	CL	MICHAEL T. MCMANUS ET AL., "Gene Silencing in Mammals By Small Interfering RNAs",	
Examiner Signature		Date Considered	

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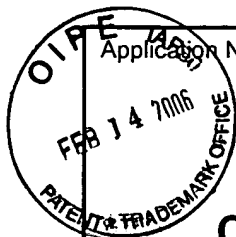
		Nature Reviews Genetics, Volume 3, October 2002, pp. 737-747.	
	CM	JAMES D. THOMPSON, "Applications of antisense and siRNAs during preclinical drug development", Drug Discovery Today, Vol. 7, No. 17, September 2002, pp. 912-917.	
	CN	SUSAN PARRISH ET AL., "Functional Anatomy of a dsRNA Trigger: Differential Requirement for the Two Trigger Strands in RNA Interference", Molecular Cell, Volume 6, November 2000, pp. 1077-1087.	
	CO	ALEXANDRA BOUTLA, "Short 5'-phosphorylated double-stranded RNAs induce RNA Interference in <i>Drosophila</i> ", Current Biology, Volume 11, (c) 2001, pp. 1776-1780.	
	CP	TORGEIR HOLEN ET AL., "Positional effects of short interfering RNAs targeting the human coagulation trigger Tissue Factor", Nucleic Acids Research, Volume 30, No. 8, (c) 2002, pp. 1757-1766.	
	CQ	HIROHIKO HOHJOH, "RNA interference (RNAi) induction with various types of synthetic oligonucleotide duplexes in cultured human cells", FEBS Letters 521, FEBS 26179, (c) 2002, pp. 195-199.	
	CR	M. HAMADA ET AL., "Effects on RNA Interference in Gene Expression (RNAi) in Cultured Mammalian Cells of Mismatches and the Introduction of Chemical Modifications at the 3'-Ends of siRNAs, Antisense And Nucleic Acid Drug Development, Volume 12, pp. 301-309.	
	CS	ANTTI NYKANEN ET AL., "ATP Requirements and Small Interfering RNA Structure in the RNA Interference Pathway", Cell, Volume 107, November 2001, pp. 309-321.	
	CT	JAVIER MARTINEZ, "Single-Stranded Antisense siRNAs Guide Target RNA Cleavage in RNAi", Cell, Volume 110, pp. 563-574.	
	CU	SCOTT M. HAMMOND ET AL., "An RNA-directed nuclease mediates post-transcriptional gene silencing in <i>Drosophila</i> cells", Nature, Volume 404, March 2000, pp. 293-296.	
	CV	M. AMARZGUIOUI ET AL., "Tolerance for mutations and chemical modifications in a siRNA", Nucleic Acids Research, Volume 31, No. 2, (c) 2003, pp. 589-595.	
	CW	D. BRAASCH ET AL., "RNA Interference in Mammalian Cells by Chemically-Modified RNA", Biochemistry, Volume 42, (c) 2003, pp. 7967-7975.	
	CX	Y. HAYAKAWA ET AL., "Toward an Ideal Synthesis of Oligonucleotides: Development of a Novel Phosphoramidite Method with High Capability", Bulletin of the chemical society of Japan, Vol. 74, No. 9, pp. 1547-1556	
	CY	DWAINE A. BRAASCH ET AL., "Novel Antisense and Peptide Nucleic Acid Strategies for Controlling Gene Expression", Biochemistry, Volume 41, No. 14, April 9, 2002, pp. 4503-4510.	

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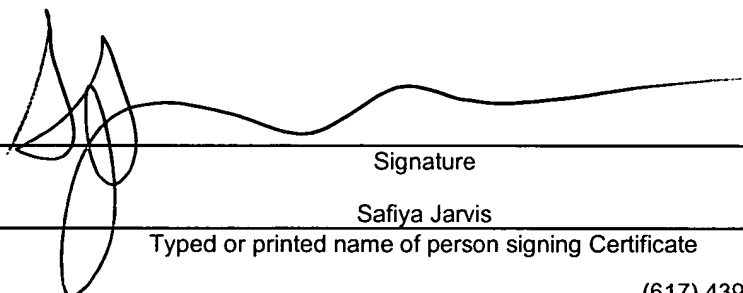
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